



## CALL A VETERINARIAN IF...

- Your pet collapses, or is very weak
- Mucous membranes (gum) color is very pale
- Blood is seen in the stool, mouth, or urine
- Your pet stops eating, vomits, or develops diarrhea
- Your pet pants excessively
- The urine is malodorous
- Abdominal distension is apparent

*The Animal Emergency Center is open 24 hours a day to provide emergency and critical care treatment for your family pet. Our care-givers work closely with you and your primary care veterinarian to provide the most affordable care possible for your ill or injured dog, cat, bird, reptile or small mammal. Our team consists of emergency and critical care veterinary and technician specialists, as well as specialists in the fields of surgery, internal medicine, exotic animal medicine, dentistry, and oncology. Our staff doctors, receptionists and nurses have all received special training to aid you and your pet in your time of need.*



### Directions

From I-43, take Silver Spring Drive West Exit for 0.9 miles. AEC is on the north side of Silver Spring, just past Green Bay Road. Turn directly from Silver Spring into the AEC parking lot.

From I-45, take Silver Spring Drive East Exit for 6.0 miles. AEC is on the north side of Silver Spring, just past Teutonia Avenue. Turn left on Crestwood Boulevard at the light to enter the AEC parking lot from this direction.

**Animal Emergency Center  
2100 W. Silver Spring Dr.  
Glendale, WI 53209**

**414-540-5710**

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## **IMMUNE-MEDIATED HEMOLYTIC ANEMIA**

## **IMMUNE-MEDIATED THROMBOCYTOPENIA**

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Animal Emergency Center



At the heart of critical care



## WHAT IS IMHA?

Immune-mediated hemolytic anemia (IMHA) is a syndrome wherein the body's immune system is destroying its own *red blood cells*. Red blood cells are necessary to carry oxygen from the lungs to the tissues. Their destruction or loss can result in a severe anemia and decreased oxygenation of the tissues with organ dysfunction. In addition, this syndrome makes the patient predisposed to thrombosis, or clots. Clinical signs resulting from IMHA may include weakness, panting, and increased breathing rate or effort. IMHA may also result in jaundice (yellow color to the skin and membranes), pale membrane color, fever, and orange or red urine. Any species or breed of animal can develop IMHA.



## WHAT IS ITP?

Immune-mediated thrombocytopenia (ITP) is a syndrome wherein the body's immune system is destroying its own *platelets*. When the platelet numbers decline, normal clotting does not occur, and bleeding into any tissue or body cavity can result. If the bleeding is significant enough to cause an anemia, reduced oxygen to the tissues can result in organ dysfunction. Clinical signs resulting from ITP include pinpoint bleeding in the skin and membranes, and bleeding from the gums or nose. If bleeding is significant enough to result in an anemia, weakness and increased breathing rate can occur. Any species or breed of animal can develop ITP.



## WHAT CAUSES IMHA & ITP?

The underlying cause of an overactive immune response causing IMHA or ITP is many times not apparent. Exposure to toxins, antigens, drugs, and some cancers are associated with these syndromes. In addition, some tick-borne infections, such as

ehrlichiosis and babesiosis, can cause these syndromes. To identify an underlying condition, your veterinarian may recommend a battery of tests, such as lung and abdominal xrays, abdominal ultrasound, a blood immune panel, an infectious panel, and bone marrow sampling. Other specific tests may be recommended to obtain the diagnosis and baseline values for treatment and future monitoring.



## WHAT IS THE TREATMENT?

In addition to treating any underlying disease processes, the immune system needs to be suppressed, and the destruction of red blood cells and/or platelets slowed down. The most common immunosuppressive medication used is prednisone, a corticosteroid. Other immunosuppressive medication such as azathioprine, cyclosporine, or cyclophosphamide may be used in addition to prednisone.



## THE SICK IMHA/ITP ANIMAL

In some cases IMHA or ITP requires intensive treatment and monitoring. Dehydration, shock, anemia, thrombosis, and organ dysfunction may develop. Fluid therapy, transfusions, intravenous medication and nutritional support may be necessary. Your veterinarian may also recommend administration of immunoglobulins or vincristine, drugs that may help control the destruction of the red blood cells or platelets.

Prognosis is variable and unpredictable. Success of treatment depends on any underlying disease process, organ dysfunction, response to therapy, or side effects to treatment. Your veterinarian will discuss your pet's condition, and answer any questions you might have regarding their present condition.



## HOME TREATMENT

Keys to successful treatment involve a combination of immunosuppressive medication, rest, and close monitoring by your veterinarian.

### *Immunosuppressive therapy*

- Prednisone, a corticosteroid, typically causes increased drinking and urination in the dog and increased appetite. Occasionally excessive panting, or gastrointestinal ulcer formation can occur. If the side effects of prednisone become intolerable or severe gastrointestinal ulceration occurs, alterations in the dose and frequency may be made by your veterinarian. Medication should never be acutely discontinued without the direction of the veterinarian.
- Azathioprine, cyclosporine and cyclophosphamide are potent immunosuppressive medications that can suppress the bone marrow production of cells. Rarely do they cause gastrointestinal upset or liver dysfunction.
- Immunosuppressive therapy will make the patient more susceptible to infections, therefore frequent reevaluation by a veterinarian is recommended.
- Although the risk of immunosuppressive treatment is less than the effects of IMHA and ITP, life-threatening side effects of the medication can occur. Contact should be made with the veterinarian if there is any vomiting, loss of appetite, red or malodorous urine, or blood in the stool.
- Treatment is generally required for a number of months, and medication is slowly tapered based on laboratory test results. Rarely is life-long therapy necessary.